short could also result in failure of other components like the horizontal output transistor. The focus and screen are generally the top and bottom knobs, respectively. In some TVs, the focus and screen divider and/or controls are external to the flyback and susceptible to dust and problems particularly on damp days.

3.2) How is a flyback transformer different than a regular transformer?

While the following is not always strictly true for TV and monitor flyback transformers, it is a nice overview:

(From: Sivasankar Chander (siva@bond.bocaraton.ibm.com)).

The main difference between a flyback transformer and a regular transformer is that a flyback transformer is designed to store energy in its magnetic circuit, i.e., it functions like a pure inductor, whereas a regular transformer is designed to transfer energy from its primary to secondary and to minimize stored energy.

Secondly, a flyback transformer in its simplest form has current flowing either in its primary, or in its secondary (but not both at the same time). (This is more complicated in practice because of finite turn-off times for transistors and diodes, need for snubber circuits, etc).

Thirdly, the reluctance of the magnetic circuit of a flyback transformer is usually much higher than that of a regular transformer. This is because of a carefully calculated air-gap for storing energy (it's an inductor).

Fourthly, the voltages applied to a flyback transformer on the primary side are almost always rectangular (pulsed) whereas regular transformers usually have sinusoidal voltages applied to them.

Fifthly, the currents flowing through either side of a flyback transformer are either increasing or decreasing linear sawtooths, whereas a regular transformer usually has sinusoidal currents.

Finally, due to the properties of core materials, flyback transformers are most conveniently operated in the range from 10^3 to 10^6 Hz, whereas regular transformers have a much wider range, from a few Hz to 10^12 Hz.

I may have succeeded in confusing you beyond redemption, so the best recourse for you would be to read any introductory textbook on switching power supplies for a more comprehensive picture.

3.3) The origin of the term, 'flyback'

In the U.S. (possibly all of North America), the transformer that generates the high voltage in a TV, monitor, or other CRT based equipment, is called the 'flyback' or 'flyback transformer'. Most everywhere else in the world, it is either LOPT (Line OutPut Transformer) or simply LOT.

The term 'flyback' probably originated because the high voltage pulse that